AMENDMENT

In the Claims

1. (Original) An imaging system comprising:

an image sensing circuitry that produces a raw image data:

an image processing circuitry, communicatively coupled to the image sensing circuitry, that processes the raw image data into a processed image data;

a transformation circuitry, communicatively coupled to the image processing circuitry, that transforms the processed image data into a final image data;

a communication circuitry, communicatively coupled to the transformation circuitry, that links the imaging system to a final storage;

an intermediate storage queue, communicatively coupled to the image processing circuitry, that stores one or more image data; and

the intermediate storage queue storing one or more image data awaiting additional processing by the imaging system.

2. (Original) The imaging system of claim 1 wherein the intermediate storage queue is communicatively coupled to the image sensing circuitry and stores one or more raw image data, the one or more raw image data being delivered to the image processing circuitry upon the occurrence of an event.

3. (Original) The imaging system of claim 2 wherein the one or more raw image data is held in the intermediate storage queue while the image processing circuitry is processing another image data, and one of the one or more raw image data is delivered to the image processing circuitry when the image processing circuitry ceases processing on the another image data.

4. (Original) The imaging system of claim 2 wherein additional raw image data are stored in the intermediate storage queue, and each of the raw image data stored in the intermediate storage queue are delivered to the image processing circuitry when the amount of raw image data in the intermediate storage queue reaches a predetermined level.

5. (Original) The imaging system of claim 1 wherein the intermediate storage queue is communicatively coupled to the transformation circuitry and stores one or more processed image data, the processed image data being delivered to the transformation circuitry upon the occurrence of an event.

6. (Original) The imaging system of claim 5 wherein the one or more processed image data is held in the intermediate storage queue while the transformation circuitry is processing another image data, and one of the one or more processed image data is delivered to the transformation circuitry when the transformation circuitry ceases processing on the another image data.

7. (Original) The imaging system of claim 5 wherein additional processed image data are stored in the intermediate storage queue, and each of the processed image data stored in the intermediate storage queue are delivered to the transformation circuitry when the amount of processed image data in the intermediate storage queue reaches a predetermined level.

8. (Original) The imaging system of claim 1 wherein the transformation circuitry performs a compression on the image data.

9. (Original) The imaging system of claim 1 further comprising a processing circuitry monitoring the status of the intermediate storage queue.

10. (Original) The imaging system of claim 1, wherein the imaging system processes the image data in the intermediate storage queue in response to an indication that the imaging system has been linked to an external power source.

11. (Currently Amended) An electronic imager, the electronic imager performing processing on an acquired image, the electronic imager comprising:

a first and a second functional imaging subsystems, each imaging subsystem performing a processing step on the acquired image, the first imaging functional subsystem communicatively coupled to the second imaging functional subsystem and communicating to the second imaging functional subsystem an image data; and

an intermediate image storage buffer, communicatively coupled to the first and second imaging functional subsystems, the intermediate storage buffer storing one or more image data communicated from the first imaging functional subsystem to the second imaging functional subsystem.

12. (Original) The electronic imager of claim 11, the first imaging subsystem comprising an image interface circuitry producing a raw image data, the second imaging subsystem comprising an image processing circuitry that processes the raw image from the image interface circuitry, and the intermediate image storage buffer storing one or more raw image data originating from the image interface circuitry.

13. (Original) The electronic imager of claim 12, wherein the one or more raw images are communicated to the intermediate storage buffer in response to a signal.

14. (Original) The electronic imager of claim 13 wherein the signal indicates that the image interface circuitry is producing a raw image at a faster rate than the processing circuitry can process the raw image.

15. (Original) The electronic imager of claim 13 wherein the signal indicates that the intermediate storage buffer contains less than a predetermined amount of raw image data.

16. (Original) The electronic imager of claim 11, the first imaging subsystem comprising an image processing circuitry producing a processed image data, the second imaging subsystem comprising a transformation circuitry that processes the processed image from the image processing circuitry, and the intermediate image storage buffer storing one or more processed image data originating from the image processing circuitry.

17. (Original) The electronic imager of claim 16, wherein the one or more processed images are communicated to the intermediate storage buffer in response to a signal.

18. (Original) The electronic imager of claim 17 wherein the signal indicates that the image processing circuitry is producing a processed image at a faster rate than the transformation circuitry can process the processed image.

19. (Original) The electronic imager of claim 17 wherein the signal indicates that the intermediate storage buffer contains less than a predetermined amount of processed image data.

20. (Original) A method of operating an imaging system, the imaging system comprising an image sensor, an interface circuitry, and an image processing circuitry, the method comprising the steps of:

acquiring an initial image in the image sensor;

producing a first image data from the initial image in the interface circuitry;

processing the first image data into a second image data; and

selectively storing the first image data in a buffer based on whether the step of processing is already operating on a previously communicated first image data.

21. (Original) The method of claim 20 wherein the step of processing the first image data into a second image data further comprises the step of transforming a processed image data into a final image data in a transformation circuitry, and the step of selectively storing comprises storing the second image.

22. (Original) The method of claim 20 wherein the step of processing the first image data into a second image data further comprises the step of transforming a raw image data into a processed image data in an image processing circuitry, and the step of selectively storing comprises storing the raw image.